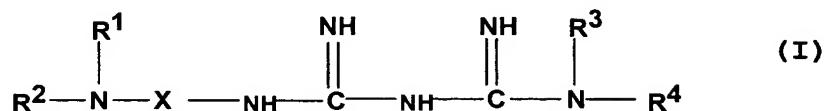


What is claimed is:

1. A sterile pharmaceutical composition for disinfecting contact lenses, comprising a compound of the following formula, in an amount effective to disinfect the lens:



wherein:

R¹, R², R³ and R⁴ are the same or different and are selected from the group consisting of hydrogen, alkyl (C₁ to C₂₀), aminoalkyl (C₁ to C₂₀), aryl, arylalkyl (C₃ to C₂₀), aryloxyalkyl (C₃ to C₂₀) and cycloalkyl (C₃ to C₂₀); and

X is alkyl (C₂ to C₂₀), optionally containing one or more substituents selected from the group consisting of cycloalkyl (C₃ to C₂₀), aryl, arylalkyl (C₃ to C₂₀) and aryloxyalkyl (C₃ to C₂₀), or a pharmaceutically acceptable salt thereof; and an aqueous vehicle therefor.

2. A composition according to Claim 1, wherein R¹, R², R³ and R⁴ are selected from the group consisting of hydrogen, alkyl (C₁ to C₂₀), benzyl and 1,4-dimethylpentyl, and X is selected from the group consisting of alkyl (C₂ to C₁₀) and alkyl (C₂ to C₁₀) substituted with cycloalkyl (C₃ to C₂₀).

3. A composition according to Claim 2, wherein X is propyl, R¹ is methyl, R² is dodecyl, R³ is hydrogen, and R⁴ is selected from the group consisting of 1,4-dimethylpentyl, heptyl, benzyl, decyl and N-methyl-N-dodecyl amino propyl.

4. A composition according to Claim 2, wherein R¹ is methyl, R² is dodecyl, R³ is hydrogen, R⁴ is 1,4-dimethylpentyl and X is propyl.

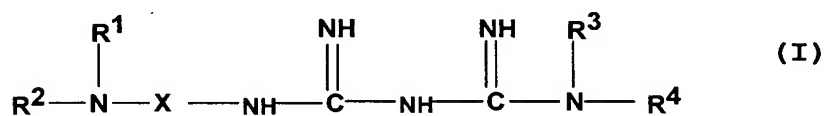
5. A composition according to Claim 1, wherein the composition further comprises 0.001 to 0.01 w/v % of a polymeric quaternary ammonium compound.

5 6. A composition according to Claim 5 wherein the polymeric quaternary ammonium compound comprises polyquaternium-1 at a concentration of 0.001 w/v %.

7. A method of disinfecting a contact lens which comprises applying the
10 composition of Claim 1 to the lens for a time sufficient to disinfect the lens.

8. A method according to Claim 7, wherein the lens is soaked in the composition for at least four hours.

15 9. A compound of the following formula:



wherein:

20 R^1 , R^2 , R^3 and R^4 are selected from the group consisting of hydrogen, alkyl (C_1 to C_{20}), aminoalkyl (C_1 to C_{20}) and cycloalkyl (C_3 to C_{20}); and

X is selected from the group consisting of alkyl (C_2 to C_{10}) and alkyl (C_2 to C_{10}) substituted with cycloalkyl (C_3 to C_{20});

or a pharmaceutically acceptable salt thereof.

25 10. A compound according to Claim 9, wherein R^1 , R^2 , R^3 and R^4 are selected from the group consisting of hydrogen and alkyl (C_1 to C_{20}).

11. A compound according to Claim 10, wherein X is propyl, R¹ is methyl, R² is dodecyl, R³ is hydrogen, and R⁴ is selected from the group consisting of 1,4-dimethylpentyl, heptyl, decyl and N-methyl-N-dodecyl amino propyl.

5 12. A compound according to Claim 11, wherein R¹ is methyl, R² is dodecyl, R³ is hydrogen, R⁴ is 1,4-dimethylpentyl, and X is propyl.

13. A pharmaceutical composition comprising an amount of a compound of Claim 9 effective to preserve the composition from microbial contamination.

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14. A pharmaceutical composition according to Claim 13, wherein the composition is an aqueous ophthalmic composition.

15. A pharmaceutical composition according to Claim 13, wherein the
15 composition is an aqueous otic composition.

16. A pharmaceutical composition according to Claim 13, wherein the composition is utilized to treat contact lenses.

20 17. A pharmaceutical composition according to Claim 16, wherein the composition contains a compound of formula (I) wherein R¹, R², R³ and R⁴ are selected from the group consisting of hydrogen and alkyl (C₁ to C₂₀), and X is selected from the group consisting of alkyl (C₂ to C₁₀) and alkyl (C₂ to C₁₀) substituted with cycloalkyl (C₃ to C₂₀).

18. A pharmaceutical composition according to Claim 17, wherein the composition contains a compound of formula (I) wherein X is propyl, R¹ is methyl, R² is dodecyl, R³ is hydrogen, and R⁴ is selected from the group consisting of 1,4-
5 dimethylpentyl, heptyl, benzyl, decyl and N-methyl-N-dodecyl amino propyl.

19. A pharmaceutical composition according to Claim 18, wherein the composition contains a compound of formula (I) where R¹ is methyl, R² is dodecyl, R³ is hydrogen, R⁴ is 1,4-dimethylpentyl and X is propyl.